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Claudio L.K. Lins

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/766,730
Filing Date: January 22, 2001
Appellant(s): LINS, CLAUDIO L.K.

Andrew J. Heinisch
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on 12/14/06 appealing from the Office action mailed 7/10/06.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner. Rabe et al (U.S.P.N. 6,531,142) in view of Schroeder et al (U.S.P.N. 5,591,395) for claims 6-8; Rabe et al (U.S.P.N. 6,531,142) in view of Schroeder et al (U.S.P.N. 5,591,395) and further in view of Coffee (U.S.P.N. 6,880,554) for claims 18-21 and claim 16; Rabe et al (U.S.P.N. 6,531,142) in view of Schroeder et al (U.S.P.N. 5,591,395) and further in view of Coffee (U.S.P.N. 6,880,554) and Peltier (U.S. P.N. 5,382,410) for claim 25; and Coffee (U.S.P.N. 6,105,877) in view of Schroeder et al (U.S.P.N. 5,591,395), Rabe et al (U.S.P.N. 6,531,142) , and Bloch (U.S.P.N. 4,071,616) for claims 22-24.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,531,142	Rabe et al.	3-2003
5,591,395	Schroeder et al.	1-1997
5,382,410	Peltier	1-1995

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-5, 9, 11-13, 15 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Rabe et al (U.S.P.N. 6,531,142).

Regarding claim 1, Rabe discloses a substantially non-aqueous electrostatically dispensable composition (abstract, lines 1-2 and col.5, lines 56-60) that includes an alcohol solvent in combination with a glycol (col.5, lines 14-17 and lines 51-53) solute such that within the disclosed range, the glycol component is capable of being the solute while the alcohol component is the solvent. The combination of the alcohol and the glycol has an inherent initial conductivity and an essential oil (col.9, line 27) as the conductivity control component. The essential oil present in an amount that is inherently capable of reducing the initial conductivity (col.4, lines 28-30 and col.9, line 27 and lines 40-42). In addition, Rabe teaches (col.2, lines 55-58) that all combinations of the various disclosed embodiments are possible. This teaching means the composition can have different combinations of its components and is not limited to what is explicitly

illustrated. Clearly in one combination, the composition of Rabe includes a liquid insulating material and a conductive material, which both are miscible and soluble in the composition (col.3, lines 34-36).

Regarding claim 9, Rabe discloses a substantially non-aqueous composition (col.5, lines 56-60) that includes the following: a glycol component present in the range from about 2% weight to about 90% weight (col.5, lines 14-17 and lines 51-53), an alcohol component present in the range from about 2% weight to about 90% weight (col.5, lines 14-17 and lines 51-53) and a conductivity control component present from about 0.5% weight to about 20% weight (col.4, lines 28-30 and col.9, line 27 and lines 40-42). The conductivity control component of Rabe is inherently capable of providing a conductivity value and/or values that fall within or overlap with the conductivity range recited in claim 9, because the concentration range of the conductivity control component of Rabe overlaps with the conductivity control component range featured in claim 9. The specification on page 4, lines 6-22, teaches that a composition having an alcohol component in the range about 10 weight percent to about 80 weight percent in combination with a glycol component result in the formation of an azeotropic mixture upon addition of water. On the same page the specification further teaches that determining the amount of water is a matter of routine experimentation. Rabe teaches a composition having an alcohol component concentration range that encompass the range disclosed on page 4 of the specification. In addition, Rabe teaches adding a glycol agent along with water (col.5, lines 51-53 and lines 56-60). Clearly, the Rabe's composition is inherently capable of forming an azeotropic composition just like the

instant claims. In addition, Rabe teaches (col.2, lines 55-58) that all combinations of the various disclosed embodiments are possible. This teaching means the composition can have different combinations of its components and is not limited to what is explicitly illustrated. Clearly in one combination, the composition of Rabe includes a liquid insulating material and a conductive material, which both are miscible and soluble in the composition (col.3, lines 34-36) and immiscible and insoluble topical particulates are excluded.

Regarding claim 13, Rabe discloses a system for electrostatic delivery (i.e., a vaporizing emitter, col.12, lines 56-67 through col.14, lines 1-10) of an antimicrobial composition (col.5, lines 56-60) in an aerosol suspension form (col.12, lines 9-14) that includes a glycol component in combination with an alcohol component as having an inherent initial conductivity and an essential oil (col.9, line 27) as the conductivity control component. The essential oil present in an amount that is inherently capable of reducing the initial conductivity (col.4, lines 28-30 and col.9, line 27 and lines 40-42). Furthermore, Rabe discloses an electrostatic dispensing apparatus having the following: a liquid reservoir (col.12, lines 57-58), an electrostatic charging element (col.14, lines 8-10), a voltage source (col.12, lines 59-60) and a dispenser (col.13, lines 20-21).

Regarding claims 2 and 5, Rabe teaches the use of ethanol and propylene glycol (col.5, line 54) such that propylene glycol is at a concentration range of from about 2% weight to about 90% weight (col.5, lines 14-17 and lines 51-53).

Regarding claims 3-4, 11-12 and 17, Rabe teaches adding essential oils (i.e., conductivity control component) in an amount present from about 0.5% weight to about

20% weight (col.4, lines 28-30 and col.9, line 27 and lines 40-42). The conductivity control component of the Rabe reference is inherently capable of providing a conductivity value and/or values that fall within or overlap with the conductivity range recited in claims 3, 12 and 17, because the concentration range of the conductivity control component of the Rabe reference overlaps and/or encompasses the conductivity control component ranges disclosed in claims 3, 12 and 17.

Regarding claim 15, Rabe discloses a glycol component in combination with an alcohol component (col.5, lines 14-17 and lines 51-53) such that the glycol component is capable of being the solute while the alcohol component is the solvent.

Claims 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rabe et al (U.S.P.N. 6,531,142) as applied to claims 9, and 13, and further in view of Schroeder et al (U.S.P.N. 5,591,395).

Regarding claim 10, Rabe teaches the combined use of a glycol component with an ethanol component (col.5, lines 51-53). Since the Rabe's concentration range for glycol and ethanol encompasses the ranges recited in the instant claims then the composition of Rabe intrinsically has a viscosity value that falls within the viscosity range recited in claim 10. Rabe fails to teach the use of triethylene glycol.

Schroeder teaches the use of triethylene glycol (example 2). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of Rabe by substituting propylene glycol for triethylene glycol since triethylene glycol is one of the preferred glycol materials named by Schroeder (col.1, lines 66-67) for its ability to readily generate particles, which form an aerosol

suspension in the air at temperatures, which can safely be used in a small consumer appliance (col.1, lines 62-66).

Regarding claim 14, Rabe fails to teach providing 3-log reduction in airborne microbial levels. Schroeder teaches that the composition causes a reduction of 3-log in the airborne microbial levels (Examples 1-2). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Rabe composition by choosing triethylene glycol since it causes a substantial reduction in the amount of airborne bacteria present as taught by Schroeder (col.4, lines 10-17).

Claims 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rabe et al (U.S.P.N. 6,531,142) as applied to claim 13 and further in view of Peltier (U.S.P.N. 5,382,410).

Regarding claims 26-27, Rabe teaches that any electrostatic system can be utilized for dispensing the composition (col.12, lines 15-23), yet Rabe fails to teach that the dispensing system does not include a spray nozzle and also fails to teach electrostatically dispensing the composition within an air duct of a central air handling system. Peltier teaches an electrostatically dispensing system without a spray nozzle (figure 1B: 6a or 6b) and placing the device within an air duct of a central air handling system (col.2, lines 47-53). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute Rabe electrostatic dispensing system with Peltier since controlling the quantity of liquid fed to the wick directly results in precisely controlling the quantity of aerosol generated (Peltier, col.2, 42-46) and to place Rabe device within an air duct of a central air handling system as

taught by Peltier in order to modify the character and quality of the air within a room or a building (Peltier, col.2, lines 64-68 and col.3, lines 1-2)) by adding scents and by disinfecting the air handling ducts.

(10) Response to Argument

I.

A. On pages 5-11 of the brief, Appellant argues that Rabe' composition is a topical cosmetic and skin care composition that includes immiscible and insoluble particulates; that Rabe requires four components into the composition and one additional optional component; that the examiner erroneously interpreted Rabe to teach that all combinations of the components of Rabe's composition are possible by including or excluding any component(s) of the composition; and that the examiner in the Advisory action concludes that all particulate material are optional, since particulate material is mentioned under the "optional components" section.

In column 2, lines 51-58, Rabe teaches that in one embodiment (each embodiment is made up of a certain number of elements or components), the composition would be made up of (consists of) any of the required or optional components. For example, in one possible embodiment, the composition is only made up of one component, an insulating material, or in another embodiment, the composition is only made up of two components, insulating and conductive material, etc. Rabe teaches various embodiments where in one of the embodiments the four components (insulating, conductive, particulate, thickener components) are present, but not all of them are required. The instant claims are crafted toward composition subject matter

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where the utility is not given patentable weight and that Rabe's components (like the claims component) have disinfecting properties as well. Furthermore, Rabe provides various weight percent values for the optional components (col.9, lines 40-42, or lines 45-47, or bottom of col.10 through top of col.11). In the advisory, the examiner pointed to the fact that particulate material are included under the "optional components" list to show that the particulate component is considered optional in one of the possible combinations of components as shown above in Rabe. However, this teaching does not mean that particulate material is optional as Appellant concludes. Rabe's composition is still sprayable without having the conductive material component, since its presence is to enhance the electrical potential during spraying as taught by Rabe in col.6, lines 6-9. In addition, the optional list includes skincare components and the cosmetic benefits are not limited to particulate components.

B. On pages 12-13 of the brief, Appellant argues that Rabe does not teach either an electrostatic wick and/or vaporizing emitter which allows a composition to vaporize or turn into an aerosol suspension within the surrounding air.

Rabe teaches an apparatus that discharges a spray of charged droplets (col.13, lines 26-28) that are suspended in gas, which is the definition of an aerosol. Rabe dispenser generates aerosol.

II.

A. On pages 13-14 of the brief, Appellant argues that Rabe's composition is for cosmetic purposes not disinfection as in the purpose of Schroeder

and that Rabe electrostatically sprays the composition to be deposited onto surface not to remain airborne as Schroeder intends for the composition.

Rabe composition is not limited to cosmetic applications, but further includes prophylactic applications, i.e., prevention against diseases (col.3, lines 14-15) where one of ordinary skill in the art would recognize that one of the purposes of disinfecting is to prevention against diseases. Rabe discloses that glycols as one of the components that are suitable as conductive material (col.5, lines 40-41) without excluding any type of glycol and one of ordinary skill in the art reading the disinfecting (prophylactic) properties of triethylene glycol in combination with its ability to form aerosol suspensions (droplets) as taught by Schroeder (col.1, lines 64-65) would be motivated to included it in the composition of Rabe as the conductive component.

B. On pages 14-15 of the brief, Appellant argues that modifying Rabe's teachings for generating droplets of the composition onto surfaces of skin to include triethylene glycol for its disinfecting ability of 3-log reduction in airborne microbial levels change the principle operation of Rabe.

As explained above that one of Rabe's goal is to prevent diseases and also his teaching of using any glycol component in his composition without any mention that certain glycol compounds have no contribution to the conductivity property. As such one of ordinary skill in the art reading the disinfecting (prophylactic) properties of triethylene glycol (regardless of its application to airborne pathogens) in combination with its ability to form aerosol suspensions (droplets) as taught by Schroeder (col.1,

lines 64-65) would be motivated to include it in the composition of Rabe as the conductive component.

D. On pages 17-18 of the brief, Appellant argues that modifying the purpose of Rabe to electrostatically spray the composition onto a particular surface, by forming an aerosol within air in an air duct renders Rabe unsatisfactory for its intended purpose.

As explained above, Rabe forms an aerosol composition to prevent diseases on surfaces and one of ordinary skill in the art would recognize upon reading Peltier, which prevents diseases by generating a disinfecting composition in aerosol to disinfect inner surfaces of ventilation systems, to provide the composition of Rabe into the apparatus of Peltier so that the inner surfaces of air handling systems are disinfected as explained by Peltier (col.2, lines 50-52).

E. On pages 18-19 of the brief, Appellant argues that Rabe requires the use of a nozzle to be able to directly apply the compositions onto the skin by electrostatic spray techniques and that the lack of use of a nozzle would not enable generating composition in aerosol form on intended sites.

As explained above, Rabe forms an aerosol composition to prevent diseases on surfaces and one of ordinary skill in the art would recognize upon reading Peltier, which prevents diseases by electrostatically generating a disinfecting composition in aerosol to disinfect inner surfaces of ventilation systems without using a spray nozzle, to provide the composition of Rabe into the apparatus of Peltier so that the inner surfaces of air handling systems are disinfected as explained by Peltier (col.2, lines 50-52).

(11) Related Proceeding(s) Appendix

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No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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